BRUHAT BANGALORE MAHANAGARA PALIKE

Byatarayanapura Division

NAME OF WORK: - -IMPROVEMENTS OF ROADS,DRAINS AND OTHER ALLIED WORKS AT AK COLONY MARUTHI NAGARA & SURROUNDING AREAS IN WARD NO.11 KODIGEHLLI

DETAILED COST ESTIMATE

Estimate Cost : Rs.64.50 Lakhs

SL NO	PARTICULARS	UNIT	NO	MEASUREMENT			QUANTITY	RATE	AMOUNT
				LENGTH	BREADTH	DEPTH			
1	Removing and resetting of footpath slab (Approved arrival rate)								
	AK colony Cross Road	Sqm	2.00	383.00	0.90		689.40		
					Sub Total		**689.40**		
	Consider 85%						**585.99**		
	Deduct 20% Missing Slabs						117.198		
					Sub Total A		**468.792**		
	Culverts	Sqm	2.00	6.00	1.50		18		
					Sub Total		**18**		
	Deduct 20% Missing Slabs						3.6		
					Sub Total B		**14.4**		
					Total A+B		**483.19**	**235.00**	**113550.12**
	Data Rate	**235.00**							
2	Dismantling of cement concrete pavement, Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 m3 in volume and stock piling at designated locations and disposal of dismantled materials and stacking serviceable and unserviceable materials separately [PWD SR 2023-24/ Volume-3/ Chapter-2/P.NO-12/ Item no:-2.19/Ref. to MoRT&H : IRC 202]								
	AK colony Cross Road	Cum	1.00	210.00	4.00	0.20	168.00		
					Total		**168.00**	**619.30**	**104042.40**
	Basic Rate	**563.00**							
	Add AW 10%	56.30							
	Total	**619.30**							
3	Earth work excavation by manual means for drains, canals, waste weir, draft, approach channels, key trenches, foundation of Buildings & bridges and such simillar works in all kinds of soils, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. In all kinds of soils Depth upto 1.5 m[PWD SR 2023-24/ Volume-1/ Chapter-1/P.NO-5/ Item no:-1.4.1]								
		Drain Disilting							
	AK colony Cross Road	Cum	2.00	350.00	0.60	0.45	189.00		
	Culvert Disilting	Cum	2.00	6.00	0.90	0.50	5.40		
					Total		**194.40**	**266.20**	**51749.28**
	Basic Rate	**242.00**							
	Add AW 10%	24.20							
	Total	**266.20**							
4	Providing and laying 100mm thick pre-cast cover slabs over Road side drains / utility ducts / Rain water harvesting pit of width not exceeding 1000 mm using M20 concrete reinforced with TMT bars Fe 550 @ 6kg/m2, slabs jointed in CM 1:3 proportion and nicely finished Including providing holes in the Cover slabs wherever necessary for easy drain age of surface waterincluding of labour, materials, scaffolding, usage of machinery, curing, lead and lift charges etc, Complete.[PWD SR 2023-24/ Volume-2/ Chapter-2/P.NO-177/ Item no:-17.14]								
	New CC Slabs - 100mm								
	Quantity From Damaged/missing Slabs	Sqm	1.00	117.20			117.20		
					Total		**117.20**	**1287.00**	**150833.83**
	Basic Rate	**1170.00**							
	Add AW 10%	117.00							
	Total	**1287.00**							
5	Providing and fixing 230mm thick pre cast reinforced concrete slab as per design and drawing material cost,transportation, hire charges of machinery complete with all lead and lift conveyance charges labour charges inclusive of cost of all materials(As per data rate)								
	New CC Slabs - 230mm								
	Quantity From Damaged/missing Slabs	Sqm	1.00	3.60			3.60		
					Total		**3.60**	**5037.00**	**18133.20**
	Data Rate	**5037.00**							
	Road								
6	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work.In all kinds of soils upto 300 mm depth[PWD SR 2023-24/ Volume-1/ Chapter-1/P.NO-8/ Item no:-1.12]								

		Edge Cutting/Potholes/Road Damage							
	AK colony Cross Road	Cum	1.00	210.00	4.00	0.20	168.00		
		Cum			**Sub-Total B**		**168.00**	**104.50**	**17556.00**
	Basic Rate	**95.00**							
	Add AW 10%	9.50							
	Total	**104.50**							
7	Construction of dry lean cement concrete Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 14:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 140 kg/ m3 , optimum moisture content to be determined during trial length construction, concrete strength not to be less than 7 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 t vibratory roller, finishing and curing[PWD SR 2023-24/ Volume-3/ Chapter-6/P.NO-49/ Item no:-6.1]								
	AK colony Cross Road	Cum	1.00	210.00	4.00	0.15	126.00		
					Total		**126.00**	**5412.00**	**681912.00**
	Basic Rate	**4920.00**							
	Add AW 10%	492.00							
	Total	**5412.00**							
8	Providing and constructing un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base, with 43 grade cement or any other type as per Clause 1501.2.2 M30 (Grade), coarse and fine aggregates conforming to IS:383:2016:, maximum size of coarse aggregate not exceeding 25 mm, mixed in a concrete mixer of not less than 0.2 cum capacity and appropriate weigh batcher using approved mix design, laid in approved fixed side formwork (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the formwork as per drawing), spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including construction joints, primer, sealant, curing of concrete slabs for 14-days, and water finishing to lines and grade as per drawing and technical specification clause 1501 with all lead, lifts, loading & unloading charges, cost and conveyance of all materials, labour, equipments etc., complete. as per the directions of the Engineer-in-charge of the work.[PWD SR 2023-24/ Volume-3/ Chapter-16/P.NO-149/ Item no:-16.28]								
	AK colony Cross Road	Cum	1.00	210.00	4.00	0.15	126.00		
					Total		**126.00**	**7429.40**	**936104.40**
	Basic Rate	**6754.00**							
	Add AW 10%	675.40							
	Total	**7429.40**							
9	Geophysical investigation at site for sinking borewells for supplying drinking water to the habitation either through the Hand Pump MWS or P.W.S.S, by vertical electrical sounding by adopting Venner or Schlumbergers's method, including econnaissance survey of geological formation. Geophysical investigation of existing ground water in the vicinity, its quality, quantity and acceptability of the users, indicating the location of the site, recommended depth of casing pipe required to seal the top unconsolidated formation including an extra depth of 1.0 metre in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instruments and accessories to work site, engaging technical personal and labour required etc. NOTE: 1) Additional rate on item 1&2 is allowed for drilling in over burden and fixing Casing pipes beyond 20 M (for fixing Casing pipes only) a) Above 20 M and upto 30 M - 15%, b) Above 30 M - 30% (Measurement of overburden is restricted to the depth of casing pipe fixed excluding initial depth of 20M and projection above ground level). 2) A sum of Rs. 100/- is to be deducted for Dry Borewell towards yield test [PWD SR 2023-24/ Volume-5/ Chapter-12/P.NO-140/ Item no:-12.4]								
		each	3				**1**	**5288.00**	**5288.00**
	Basic Rate	**5288.00**							
10	Sinking of Borewell of 165mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burdern upto 20 m. Fixing of casing pipes, collars and cap with necessary cutting, threading and welding including transportation of rig and supporting vehicle, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimumworking of compressor for one hour (Excluding cost of casing pipes,collars, cap etc., complete)								
	0-50mtrs(PWD SR 2023-24Vol-V Page No.139, Item No.12.1.1)		3	50.00			**150.00**	**370.00**	**55500.00**
		mtr							
	Basic Rate	370.00							
	Total	**370.00**							
	50-100mtrs(PWD SR 2023-24Vol-V Page No.139, Item No.12.1.2)		3	50.00			**150.00**	**464.00**	**69600.00**
	Basic Rate	464.00							
	Total	**464.00**							
	100-150mtrs (PWD SR 2023-24Vol-V Page No.139, Item No.12.1.3)		3	50.00			**150.00**	**493.00**	**73950.00**
	Basic Rate	493.00							
	Total	**493.00**							
	150-200mtrs (PWD SR 2023-24Vol-V Page No.139, Item No.12.1.4)		3	50.00			**150.00**	**572.00**	**85800.00**

	Basic Rate	572.00							
	Total	**572.00**							
	200-250mtrs (PWD SR 2023-24Vol-V Page No.139, Item No.12.1.5)		3	50.00			**150.00**	**671.00**	**100650.00**
	Basic Rate	671.00							
	Total	**671.00**							
	250-300mtrs(PWD SR 2023-24Vol-V Page No.139, Item No.12.1.6)		3	50.00			**150.00**	**740.00**	**111000.00**
	Basic Rate	740.00							
	Total	**740.00**							
	300-350mtrs (PWD SR 2023-24Vol-V Page No.139, Item No.12.1.7)		3	50.00			**150.00**	**868.00**	**130200.00**
	Basic Rate	868.00							
	Total	**868.00**							
	350-400mtrs (PWD SR 2023-24Vol-V Page No.139, Item No.12.1.8)		**3**	**40.00**			**120.00**	**937.00**	**112440.00**
	Basic Rate	937.00							
	Total	**937.00**							
11	Supply of ISI mark 175mm nominal bore,plain and steel casing pipe grade of steel Fe 410 of wall thickness conforming to IS 4270-2001 and latest ammendments, electrical resistance welded steel tubes, material and conforming to IS 1387-1993 and manufactured by basic open hearth electric or basic oxygen process in random length of 5-7m both ends.threaded conforming to IS 554-1985 one end fixed with socket conforming to IS 4270-2001 and the other end with screwed pipes all shall be responsibaly free from defects. The tubes shall be responsible straight end should be with ISI marking weighing 25.10kg/m. prices include Collar-Medium duty. (PWD SR 2023-24 Vol-V Page No.143, Item No.12.32]								
		mtr	3	60.00			**180.00**	**1933.00**	**347940.00**
	Basic Rate	1933.00							
	Total	**1933.00**							
12	PVC pipes of 10 Kg/cm2 for 200mm (PWD SR 2023-24 Vol-V Page No.A-44, Item No.664]								
			3	10.00			**30.00**	**1155.00**	**34650.00**
	Basic Rate	1155.00							
	Total	**1155.00**							
13	Providing and laying at site of work MS casing caps as per IS 1239 (partII) 1982 with all latest amendments if any for any dia. The thickness of plate used for covering one end shall be 3mm (minimum). The dimensions of caps and colars shall be strictly as per IS 1239 (Part-II) 1982 with all amendments including cost of material and labour charges for fixing, if any etc. complete with all lead and lifts and as directed by the Engineer in charge (PWD SR 2023-24 Vol-V Page No 143, Item No 13.34]								
		each	3				**3.00**	**164.00**	**492.00**
	Basic Rate	164.00							
	Total	**164.00**							
14	Fabricating supplying and mounting MS box of 16 SWG suitable for floor /wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clA with necessary cable entry pipe with gland and box should be finished with 7tanks treatment with powder coated paint and finally finished with approved colour etc., complete. (PWD Electrical SR 2023-24Vol-VI Page No.20, Item No.5.42.2)								
	For New borewells	sqcm	3	120	25		**6000**		
			3	120	60		**14400**		
			3	60	25		**3000**		
							23400	**0.43**	**10062.00**
	Basic Rate	**0.43**							
15	Supply and delivery at site wrought middle steel (galvanized) 50 mm dia GI Union confirming to IS 1239-II, 1991 with latest amendments if any (PWD SR 2023-24 Vol-V , Item No.11.12.6)								
		Job	3				**3**	**267.00**	**801.00**
	Basic Rate	267.00							
	Total	**267.00**							
16	Supply and delivery at site wrought middle steel (galvanized) 50 mm dia GI hexagonal nipple confirming to IS 1239-II, 1991 with latest amendments if any. (PWD SR 2023-24 Vol-V Item No.11.14.6)								
		each	3	3			**9**	**213.00**	**1917.00**
	Basic Rate	213.00							
	Total	**213.00**							
17	Supply and delivery at site wrought middle steel (galvanized) 50 mm dia GI elbow confirming to IS 1239-II, 1991 with latest amendments if any for: (PWD SR 2023-24 Vol-V Item No.11.7)								
		each	3	3			**9**	**275.01**	**2476.00**
	Basic Rate	267.00							
	3% Area Weightage	8.01							
	Total	**275.01**							

18	Labour charges for Erection, Electrification and commissioning of Pump sets, including aligning and balancing of all items including supply and erection of two pair of supporting clamps, bore well caps, cable clips and water tight gland cable protectors, bolts, nuts, valve and gauges,tools and equipments etc., involved in the job as per specifications, with necessary tests as per specifications, with testing of as per instructions of engineer incharge of work. (PWD SR 2023-24 Vol-V , Item No.13.32)								
		each	3				3	6500.00	19500.00
	Basic Rate	6500.00							
	Total	**6500.00**							
19	Labour charges for erection of outdoor type panel board and meter boardunits with all necessary materials and labour, tools and equipments including providing cement concrete foundation bed etc., complete as per specification, with testing of as per instructions of engineer incharge of work. (PWD SR 2023-24 Vol-V Item No.13.34)								
		each	3				3	1450.00	4350.00
	Basic Rate	1450.00							
	Total	**1450.00**							
20	Supply and fixing polished wood board made of not less than 15mm thick plank on both sides of not more than 2 pieces and fixing the same to the wall using tapered inverted wooden plugs screws 20" x 20" x 2.5" (PWD Electrical SR 2022-23 Vol-VI Page No.4, Item No.5.6.6)								
		No	3				3	326.13	979.00
21	Providing,supplying to work site, Submersible Pump Set of 150mm dia suitable for bore well and confirming to IS 8034-2000;3Phase, SS Bowl & Impeller with Low volt Motor as per specifications,as per necessary ammendments and instructions of engineer incharge of work. 17.50 HP - 120 LPM @ 308 m = 26 STG Outlet Dia - 2.00" (PWD SR 2023-24 Vol-V , Item No.13.19.6)								
	For New borewells	each	3				3		
							3	77963	233889.00
22	Supply and delivery of galvanized mild steel tubes of 6mtr standard length heavy duty (C Class) as per IS 1239 (Part-I) 1990 with latest amendments with ISI Mark (one end fitted with Heavy Duty collar and other end fitted with protective cover) (PWD SR 2023-24Vol-V Item No.13.27.1)								
	For New borewells	mtr	3	55.00			165.00		
							165.00	3050.00	503250.00
	Basic Rate	3050.00							
	Total	**3050.00**							
23	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper with low resistance conductor confirming to13:8130-1984 and virgin grade PVC insulation and powder coating extruded PVC sheathed suitable for working voltage upto 1100 V as per IS-694:2010. 3C x 6 mm2 (PWD Electrical SR 2023-24 Vol-VI , Item No.2.6.3)								
	For New borewells	mtr	3	650.00			1950.00		
							1950.00	245.00	477750.00
24	Supplying fully automatic star-delta starter unit push button type with suitable wires, 3 contactors, one adjustable thermal timer mounted on a common base plate held in steel enclosure for use on 400/440 V 3 phase and wired after fixing to the existing wooden board for motor Above 12.5 HP upto 25 HP (PWD Electrical SR 2023-24 Vol-VI , Item No.5.2.2)								
		each	3				3.00	8764.00	26292.00
25	Supply and delivery at site of brand new best make gate valve as per IS 778/1984 with ISI Mark and as per its latest amendments Size 50 mm (PWD SR 2023-24 Vol-V Item No.13.24.1)								
		nos	3				3	1250.00	3750.00
	Basic Rate	1250.00							
	Total	**1250.00**							
26	Supply and delivery at site of brand new best make non-return valve as per IS 778/1984 with ISI Mark and as per its latest amendments Size 50 mm (PWD SR 2023-24Vol-V Item No.13.25.1)								
		nos	3				3.00	1250.00	3750.00
	Basic Rate	1250.00							
	Total	**1250.00**							
27	Supply and delivery at site delivery of best indigenous brand new MCB (Miniature Circuit Breakers) of required capacity as per IS 88228/1978 and its latest amendments and with ISI Mark of 6/10/16/20/25/40 Amps with scalable box. (PWD SR 2023-24 Vol-V Item No.13.26)								
	For New borewells	nos	3				3.00		
							3.00	1150.00	3450.00
	Basic Rate	1150.00							
	Total	**1150.00**							
28	Supplying and fixing of Porcelain fuse channel with cut out on existing wooden / panel using necessary nuts, bolts and washer etc., complete.... {I No 14.04 KPWD Electrical SR 2023-24}								
	For New Borewells	nos	3	1			3		
	63 Amps						3.00	138.00	414.00
29	Earth work excavation for pipelines/cables by Manual means upto 600 mm trench width, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, including dressing of excavated surfaces, disposing off or leveling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m. Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering and lift upto 1.5 m including cost of labour, tools, usage& other appurtenances required to complete the work. (PWD SR 2023-24 Vol -I Pg No 6 item no 1.6.1)								
	For Connecting borewell	cum	3	300.00	0.60	0.75	405.00		
							405.00	532.40	215622.00

	Basic Rate	484.00							
	10% Area Weightage	48.40							
	Total	**532.40**							
30	Providing and installing at site of work P.V.C. pipes including cost of pipes and specials and labour, including lowering into trenches, laying true to line, level and perfect linking at joints leak proof including jointing of approved type with all labour charges and all lift charges, handling charges including encasing the pipe around to a depth not less than 15 cms with gravel or selected earth available from the excavation etc. complete.75mm(weight of pipe -0.917 kg) (PWD SR 2023-24 Vol-V Page No.120, Item No.10.14.9)								
	For Connecting borewell	mtr	3	300.00			**900.00**		
	Sub total						**900.00**	**192.00**	**172800.00**
	Basic Rate	192.00							
	Total	**192.00**							
31	Refilling available earth around trenches/pipelines, cables in layers not exceeding 20 cms in depth, compacting each deposited layer by ramming after watering with a lead upto 50 m , and lift upto 1.5 m. Including cost of all labour complete as per specifications (PWD SR 2023-24 Vol -I Pg No 7 item no 1.10)								
	For Connecting borewell	cum	3	300.00	0.60	0.75	**405.00**		
							405.00	**176.00**	**71280.00**
	Basic Rate	160.00							
	10% Area Weightage	16.00							
	Total	**176.00**							
32	Unload ing, Loading & Carriage of MaterialsLoading and Unloading of Stone Boulder/Stone aggregates/Sand/Kankar/Moorum. (Tipper 14 m3)[PWD SR 2023-24/ Volume-3/ Chapter-1/P.NO-5/ Item no:-1.1 a]								
	QTY 1	cum					483.19		
	QTY 2						168.00		
	QTY 3						194.40		
	QTY 6						168.00		
	QTY 29						405.00		
					Total		**1418.59**	**148.50**	**210660.91**
	Basic Rate	**135.00**							
	Add AW 10%	13.50							
	Total	**148.50**							
33	Cost of Haulage Excluding Loading and Unloading,Taking output 18 t load and lead 10 km = 100 t.km[PWD SR 2023-24/ Volume-3/ Chapter-1/P.NO-3/ Item no:-1.4 iii b]								
	Quantity from Item No-1	t.km	1.00	935.40	1.28		1197.31		
						Total	**1197.31**	**88.00**	**105363.46**
	Basic Rate	**8.00**							
	10 KM LEAD [8*10=80]	80.00							
	Add AW 10%	8.00							
	Total	**88.00**							
34	BESCOM Charges		3					**20000**	**60000.00**
	Sub total								**5329747.59**
	GST Charges 18%								959354.57
	Tender Premium 3%								159892.43
	Miscellaneous & Rounding off:								1005.41
	Total Rs:								**6450000.00**

CERTIFICATE:

1. The work spot has been inspected and found to be necessary
2. The work spot comes under BBMP Limits
3. The provisions made in the estimate are necessary and minimum
4. The estimate is based on CSR of .and 2023-2024
5. The above work is not Repeated any other grants and not in the list of completed works

Assistant Engineer
Ward 11, Kodigehalli Sub-Division
BBMP

Asst. Executive Engineer
Kodigehalli Sub-Division
BBMP

Executive Engineer
Byatarayanapura Division
BBMP

ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ವಿಭಾಗ
ಬೃ.ಬೆ.ಮ.ಪಾ., ಬೆಂಗಳೂರು

ADMINISTRATIVE SANCTION

Accorded for Rs. 64.50 Lakhs

Head of A/c.... P1878

Div. Ref. No.... 48 .... Date 15/10/24

AE/DM

EE(BTP) BBMP

Technical Sanction
Accorded For Rs. 64.50 Lakhs
Head of A/C.. P1878
CER NO : 55 Dt: 15/10/24